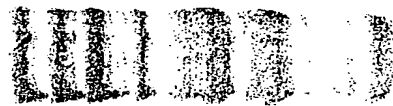


FIG. 1

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84 kDa



41 kDa

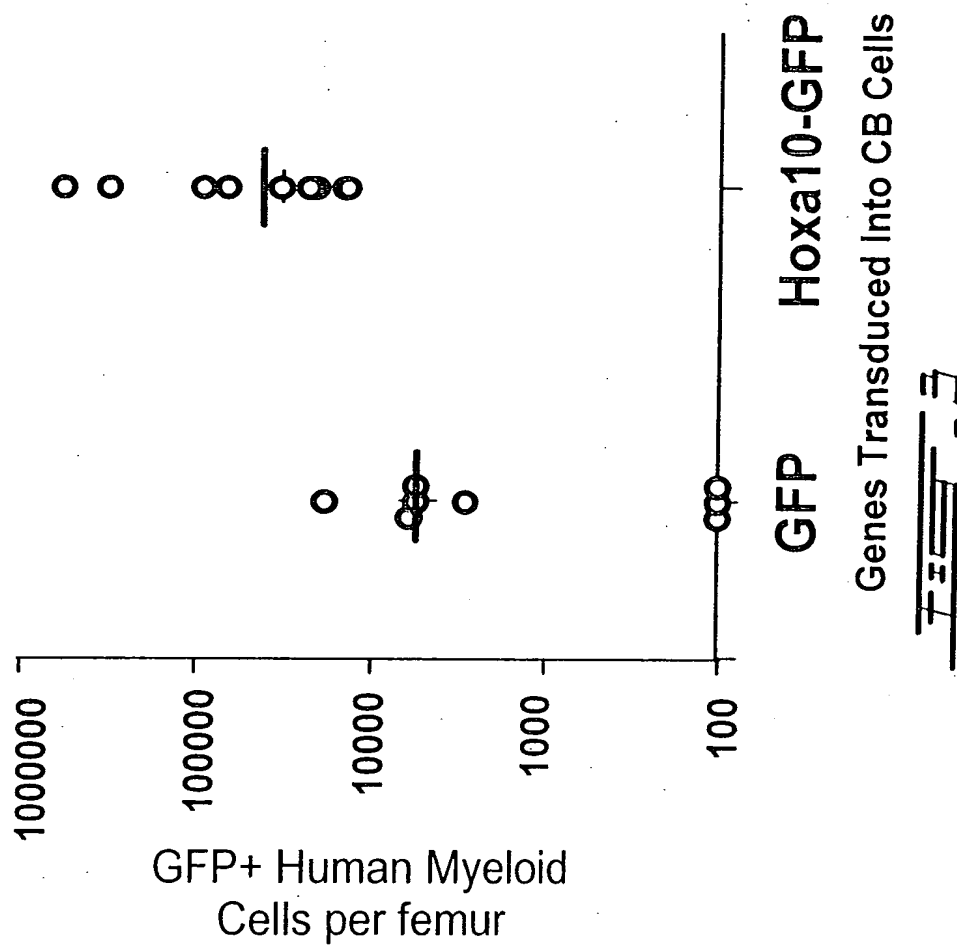
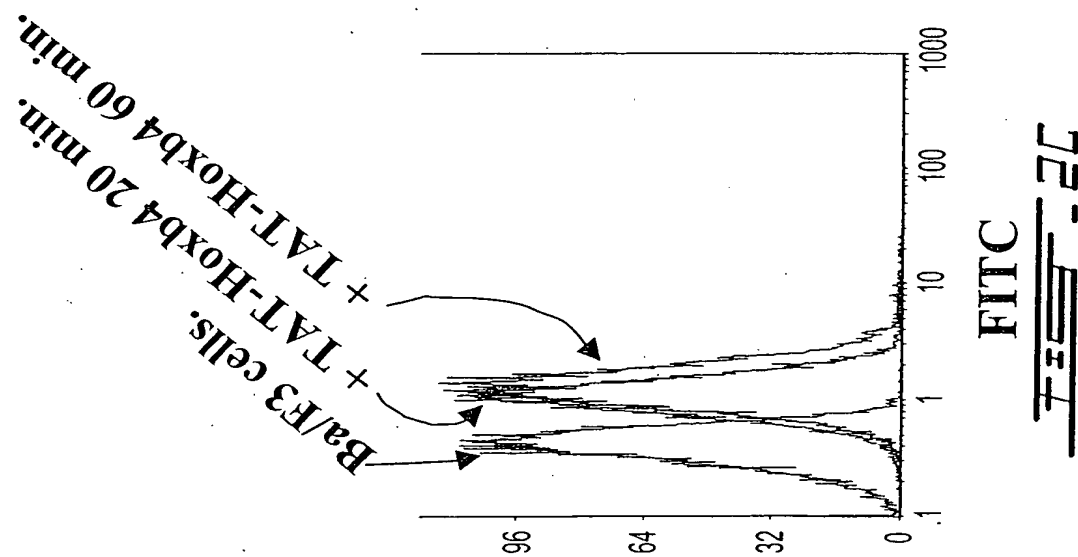


32 kDa



Fig. 2B

Fig. 2A



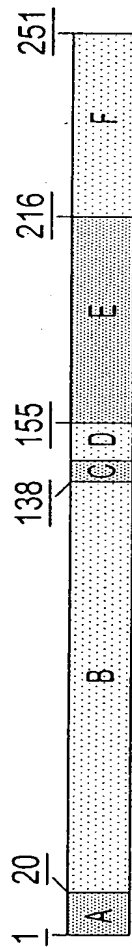


Figure 4A

Mutant HOXB4 protein (letters refer to HOXB4 domains)	Proliferative effect on Rat-1 cells	Proliferative effect on d12-CFU-S (over controls)
A to F (wild-type)	++	↑200 X
C+D+E+F	++	No increase
A+B+C	No effect	No increase
A to F with point mutation in C (Trp>Gly)	No effect	No increase
A to F with point mutation in E (Asn>Ser)	No effect	No increase

Figure 4B

Domain A: Protein sequence

Hoxa4	MTMSSEFLINSNYIEPKFPPPEEFA	PHGGPG
Hoxc4	MIMSSYLMDSNYIDPKFPPEEYSQ	
Hoxd4	--MSSYMNNSKYYVDPKFPPCEEYIQ	
Hoxb4	MAMSSSEFLINSNYVDPKFPPCEEYSQ	
Dfd	MMSSSEFLMN--VDPKFPPSEEEYNQNSY	

Conserved Tyrosine (Y) flanked by
acidic (D-E) amino-acids
suggesting that it might be a
substrate for tyrosine kinases

Domain B: Not conserved but contains :

- a long proline stretch (n=15)
- 4 tyrosines
- a potential site for phosphorylation by cAMP protein kinase
- a potential site for phosphorylation by casein kinase II
- a potential site for phosphorylation by PKC

735

Rat-1 Rat-1 HOXB4
3T3 3T3 HOXB4

47 kDa—

20 kDa—

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YGRKKRRQRRR



ATG-His6-TAT-HA-HOXB4

Fig. 7a

TAT-HOXB4 (nM)

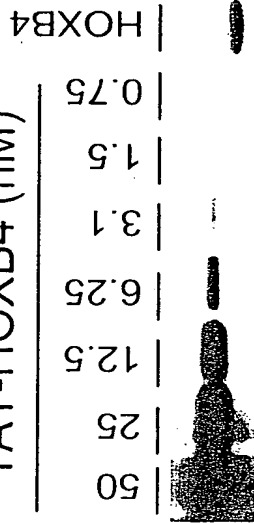


Fig. 7c

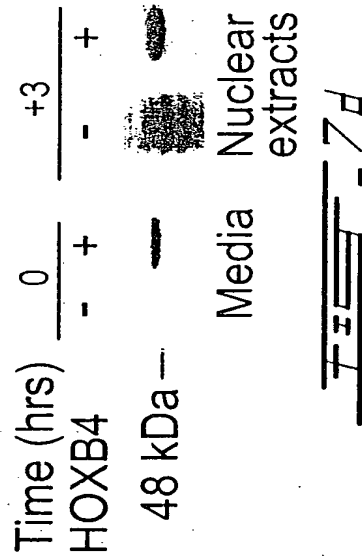


Fig. 7d

(kDa) BL H

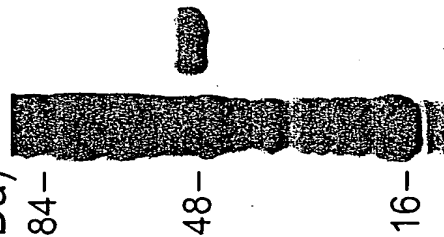


Fig. 7b

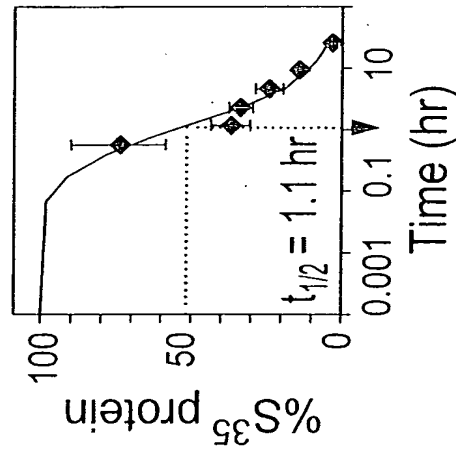


Fig. 7f

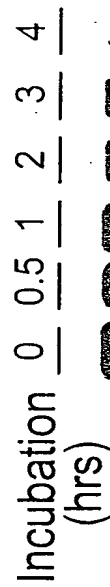
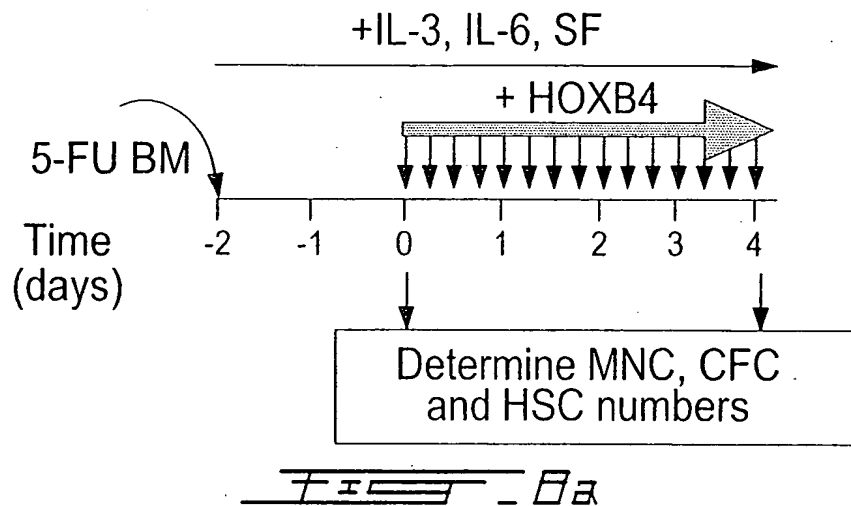
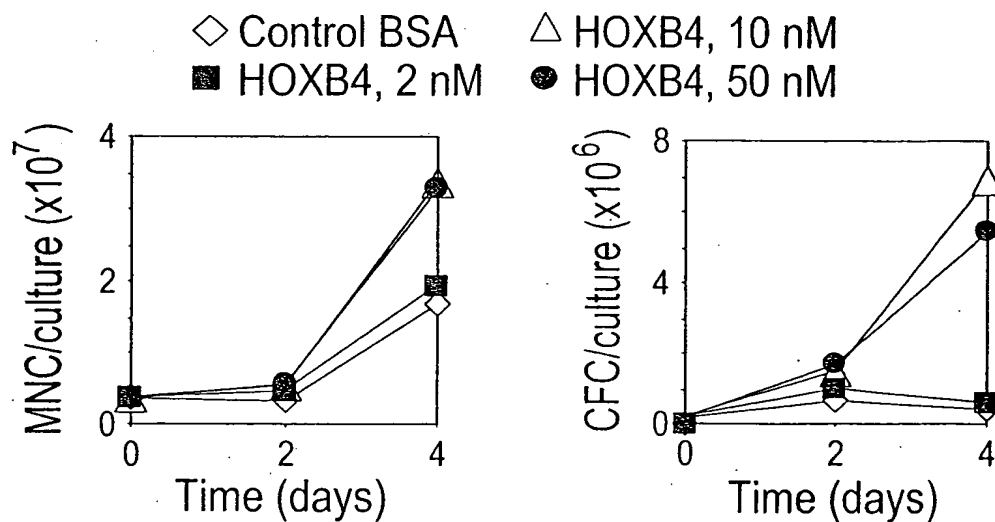


Fig. 7e

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Time (hrs)	0	+3	+6	+9	+12	+15	+18	+24
Fresh media + HOXB4	+	-	-	-	-	-	-	+
HOXB4 addition	-	+	+	+	+	+	+	-
FCS, cytokine adjustment	-	-	-	-	+	-	-	-



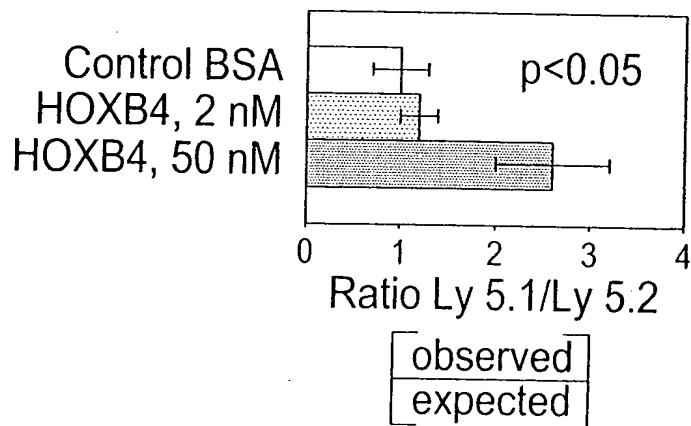


FIGURE 1

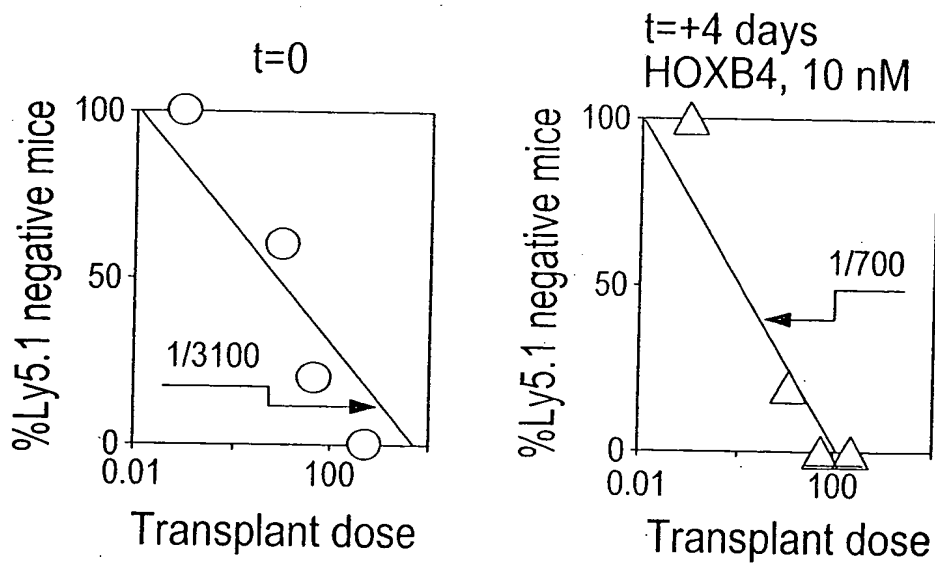
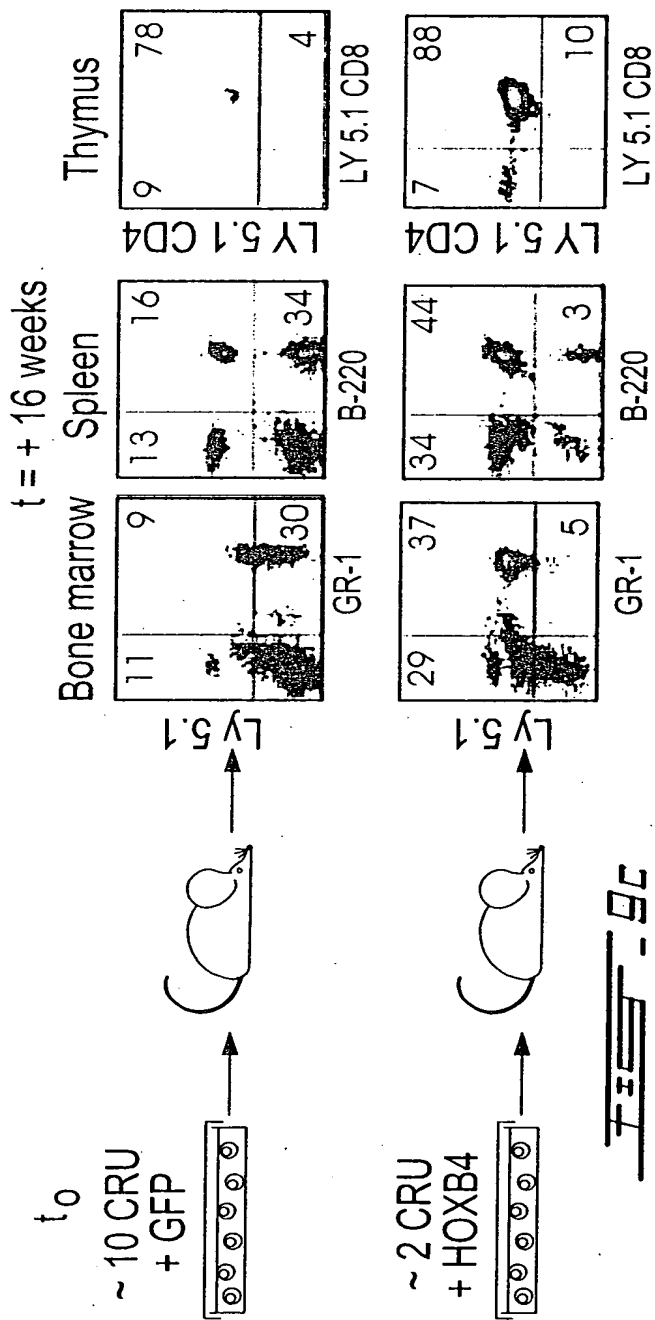
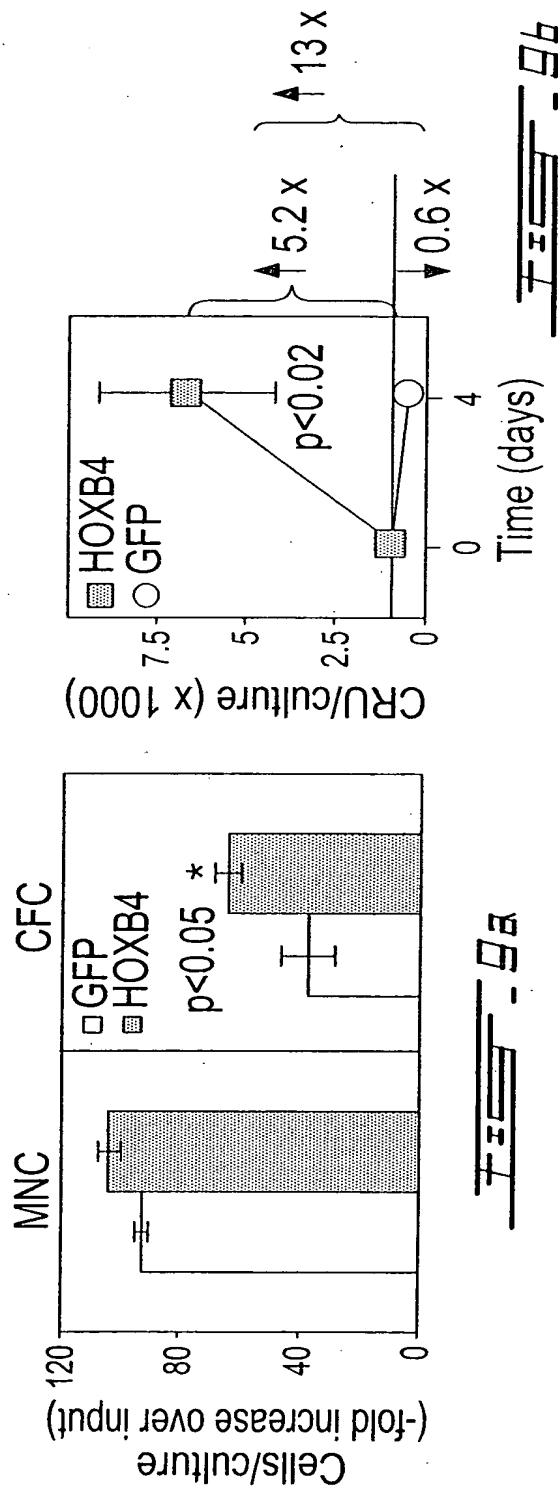


FIGURE 2



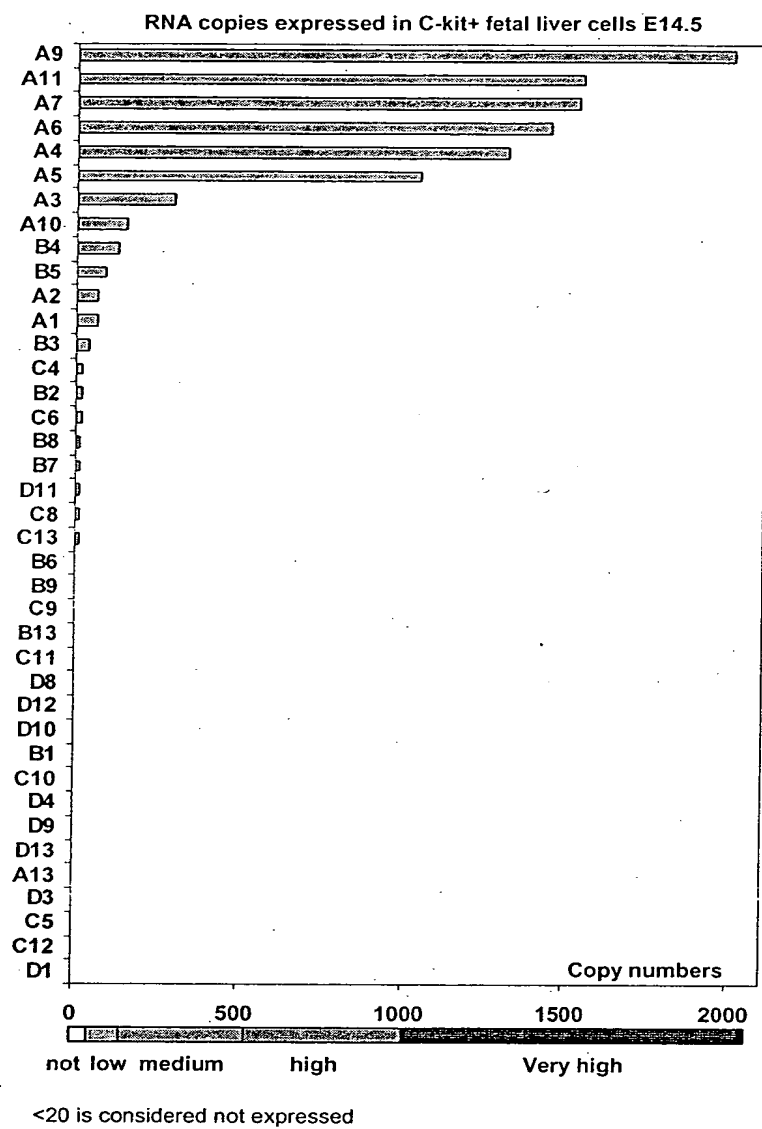


Fig. 10

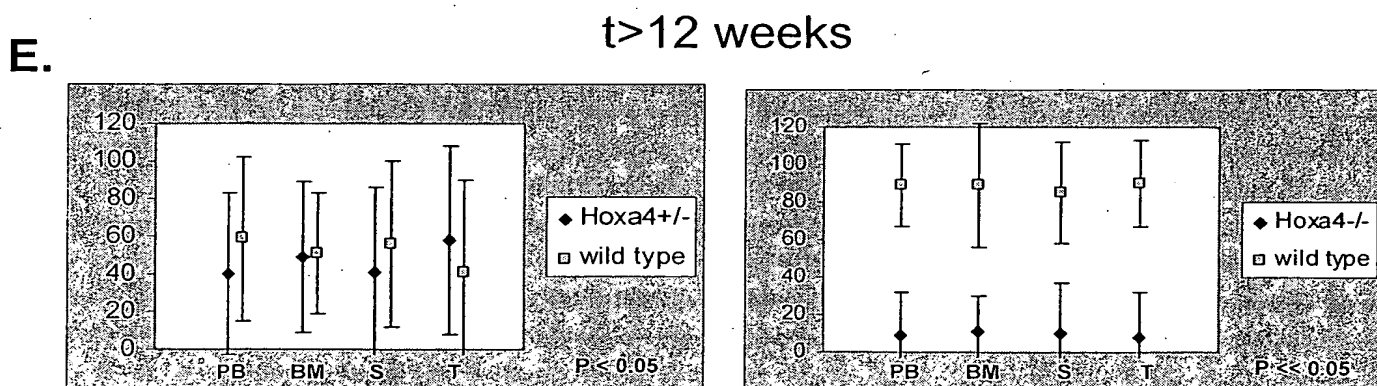
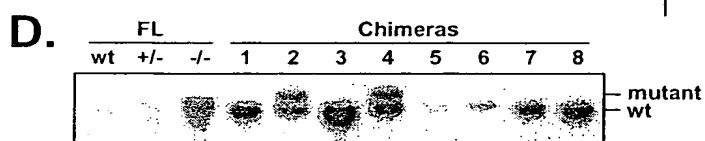
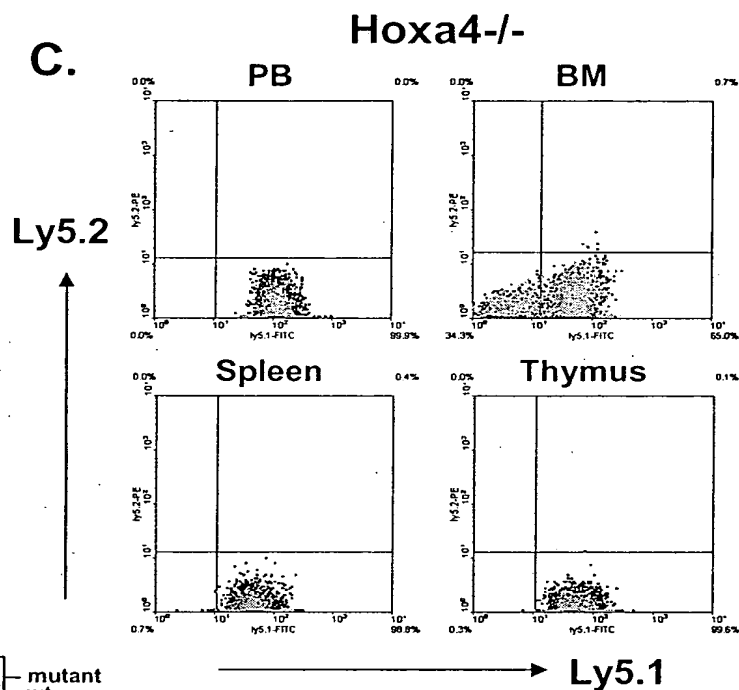
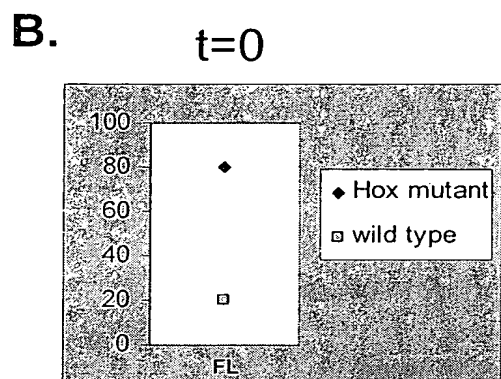
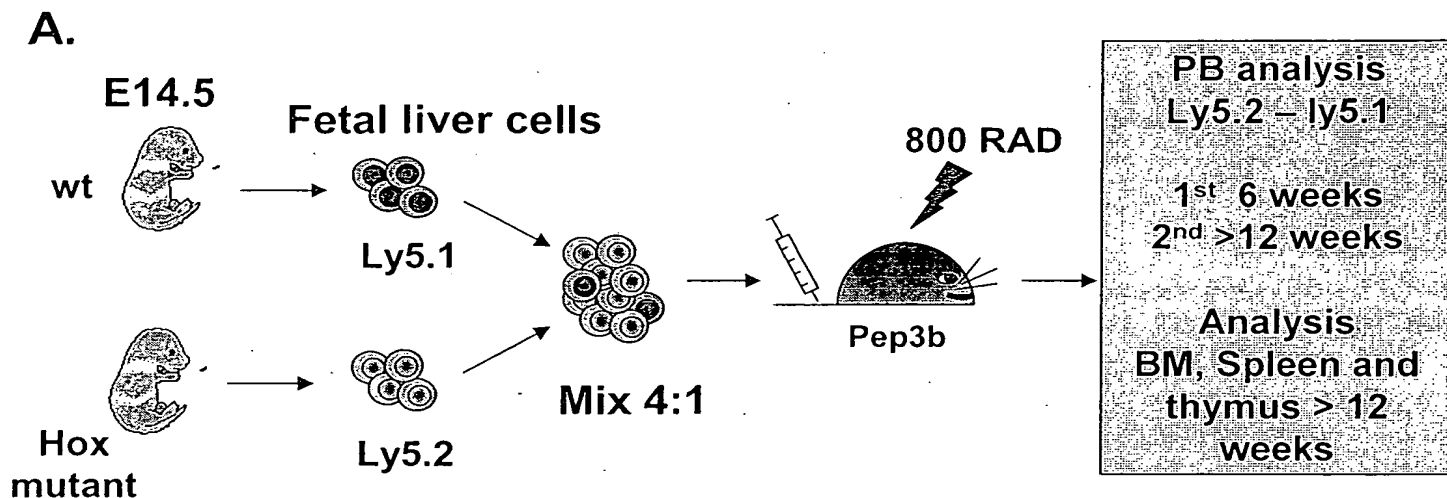
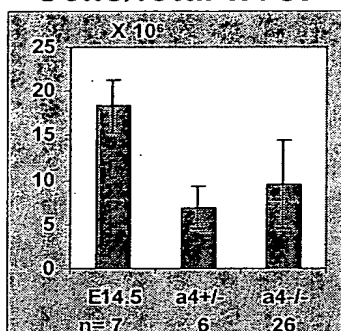
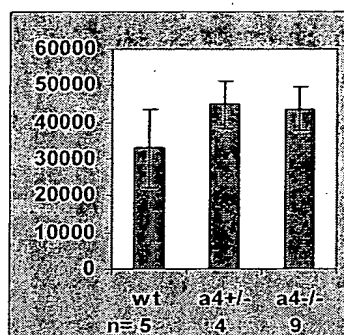


Fig. 11

A. Cells/fetal liver



B. CFC/fetal liver



C. Table 1 Hemopoietic progenitor numbers in E14.5 fetal livers of normal and mutant mice

		% SKL	SKL/FL x 10 ³	CFC/1000 SKL	cells/colony x 10 ²
wt	n=8	0.4 ± 0.2	43 ± 15	49 ± 9 ^a	7 ± 6
Hoxa4 ^{+/-}	n=8	0.7 ± 0.0	54 ± 11	72 ^b	11
Hoxa4 ^{-/-}	n=8	0.6 ± 0.1	36 ± 12	113 ± 23 ^c	12 ± 3

CFC: colony forming cell; SKL: Sca+, c-kit+, Lineage -; FL: fetal liver; : a: n=3; b: n=1; c: n=4

Fig. 12

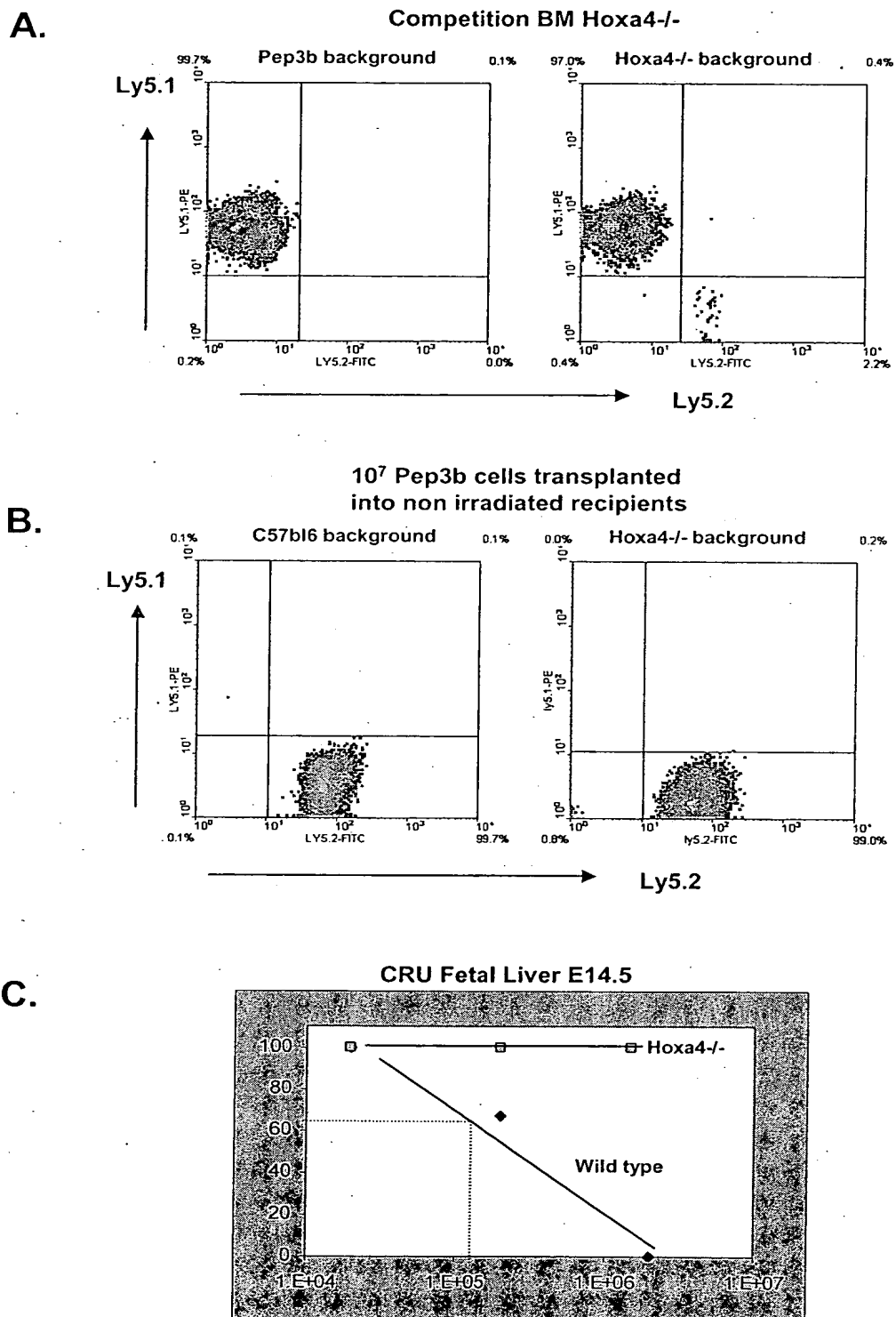


Fig. 13